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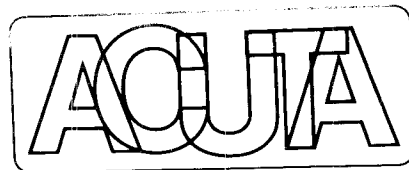
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NEWS

Association of College & University Telecommunication Administrators
THE VOICE OF TELECOMMUNICATIONS IN HIGHER EDUCATION

VOLUME 17, NUMBER 7

AUGUST, 1988

RUTH A. MICHALECKI, EDITOR

211 Nebraska Hall, University of Nebraska, Lincoln, NE 68588 • Telephone (402) 472-2000

President's Message

— Bill Morris, University of Central Florida

I have established seven goals for the association this year. Last month I wrote on goal #2, "Stimulate more member participation". Several of you have volunteered to help and have made suggestions. Please continue sending your ideas.

The prime objective of ACUTA is "to improve the professional competence of College and University Telecommunications Administrators". To further this objective, my #1 goal is "Plan more ways to serve our members by providing more educational opportunities".

This year, in addition to the three seminars and our annual conference, we have planned at least one meeting or workshop in each Region. For those who did not attend the Regional meeting I want to extend the offer I made to each group. If you will organize a group of at least twenty members from four or more institutions, ACUTA will bring the session to you. You select the topic, the location and the date(s). ACUTA will supply the best available speaker or group leader available for that time. ACUTA will subsidize the program.

The fee for the attendees will be \$25.00 per day including lunch and handout materials.

To maintain our high educational standards we will need adequate lead time. Our courses do not come out of a can. They are tailored so that they are more appropriate for College and University Telecommunications Administrators.

If you want to host a group, please contact your Regional Director.

OUR CURRENT SCHEDULE OF EVENTS IS:

October 2-5, Fall seminar, Columbus, Ohio
October 2-5, Workshop, Understanding Telecommunications, Columbus, Ohio, Region 5
October 6-7, Region 2 Meeting, Atlantic City, NJ
October 10-12, Workshop, Understanding Telecommunications, Minneapolis, MN, Region 7
October 17-19, Workshop, Understanding Telecommunications, Syracuse, NY, Region 1
November 7-9, Workshop, Understanding Telecommunications, Pomona, CA, Region 8
November 16-18, Workshop, Understanding Telecommunications, Millersville, PA, Region 2

Continued: Next page

PARTY LINE

— Ruth Michalecki, University of Nebraska

What a busy month for our office, and I'm sure for anyone working at universities at this time of the year. Starting a new academic year always involves lots of activities; there is never enough bodies or time to get everything done before the first day of classes---but somehow, it does get done. Must be magic, I guess!

We implemented our station discrete authorization numbers for students' access to our long distance service this fall. It is the first time we have used "auth" codes for student services, preferring to bill by the old "ANI" (automatic number identification) and issuing one bill instead of issuing auth codes that could be used from any phone on the system. With our Northern Telecom DMS-100 switch, we have the choice of "tying" the code to a specific station, so the student can make a call on their auth code, but only from the phone in the room where they are assigned. It was a lot of work, getting the auth numbers issued in a random manner, printed on our student calling cards and then assigning the number to a station specific, but it is working very well. The students like using the auth codes---they like getting individual bills---and our staff is relieved from the roommate hassles caused from sharing LD bills.

Touch Tone Registration was a popular issue at the ACUTA Conference in San Diego. More and more schools are using the voice processing technology to handle registration, financial aid, jobs, and other information dissemination tasks. Many have found, much to their dismay, this technology can bring a switch to it's knees---students will use these systems. Our current ACUTA President, Bill Morris, has a short article in this issue of ACUTA News with a few tips on how to avoid some of the problems with circuit overload, when using the interactive voice processing systems.

Be sure to read our new column "USER GROUPS", by Patricia Paul, the membership chair. It promises to be an informative column with info on various user group activities and meeting schedules. Please contact Pat if you have any news you would like included in this column. See you next month! ☺

USER

GROUPS

—Patricia Paul, Cornell University

Six PBX User Groups and a Centrex User Group met for two hours at the San Diego Conference. Although these sessions have been held in the past, this year we intend to keep the momentum going throughout the year.

Pat Paul, Membership Chairman, will act as User Group Coordinator. Each PBX user group has a designated ACUTA representative as well as a representative from the manufacturer. These individuals will act as liaisons between the membership and the manufacturer. Due to the diversity of Centrex offerings, there is not a manufacturer's representative, per se, but we will provide a forum for sharing common issues.

Right now there is only one ACUTA user group for each of the six major PBX manufacturers. As all of these manufacturers have officially sanctioned user groups, ACUTA's role -- at least initially -- will be to ensure that the needs and concerns of the educational market are understood and considered as input to the product development process. The "mixed market" systems, the DMS-100 and #5ESS, seem to be aligning with the Northern Telecom and AT&T groups, respectively, when the systems are partially owned by a campus. When Centrex services are leased from DMS-100 or #5ESS central offices, most of those users tend to join the Centrex groups. The choice is up to the individual institution.

We hope to have two of the seven user groups include a report in each ACUTA News. This way, each group should have information in the newsletter three times per year. We are also attempting to add Ericsson as the eighth group . . . more in future issues. The other seven user groups are listed below with the telephone and fax numbers of their respective ACUTA representative. If all goes well, we will attempt to gather PBX vendor and size information for as many of our members as possible and share that information with the membership at large later in the year.

If you have any questions or issues/concerns you would like to see addressed, please contact Pat Paul or the appropriate user group representative. Be sure to read our column next month!

Upcoming User Events:

* Farmstead Telephone Group, a reseller in Connecticut has found a **Dimension** User Group. They had their first meeting in Connecticut in June and are planning another for October in Milford, Massachusetts. If you would like more information, contact Alex Capo at Farmstead. You can reach him at 800-243-0234 or 203-659-4000.

* According to the July issue of **Procomm** magazine, the Second Annual National **Centrex** Users Conference will be held October 25-27 in Houston, Texas. It will have 75+ exhibit booths, round-table discussions with users and RBOC's as well as DMS-100 and #5ESS user sessions. For meeting information, contact Dick Jenifer at 312-822-7397. If you want membership information, call Muriel Sykes at 415-768-4356 or Norma Donofrio at 415-323-2099.

* The **System 85**, **System 75** and **ETN** User Groups will meet for a combined meeting in St. Louis, November 14-18. For further information, contact Pat Paul (Cornell University) at 607-255-5525.

* The National **ROLM** Users Group (NRUG) will meet in Santa Clara, California, October 11-14. More information is available from Phyllis Johnson (National Electric Service) at 615-747-3996 or George Mulner at 216-523-4506.

PBX and CENTREX USER GROUP LEADERS

| | | |
|------------------|--|--------------|
| AT&T | Donna Powell - Cal. St./Sacramento | 916-278-6923 |
| GTE | Tom Newell - University of North Texas | 817-565-3388 |
| InteCom | Ralph Berg - Northern Arizona Univ. | 602-523-5983 |
| NEC | Tom Bonadeo - James Madison Univ. | 703-568-6108 |
| Northern Telecom | Connie Pottenger | |
| | Indiana Univ./Purdue at Indianapolis | 317-274-9889 |
| IBM/ROLM | Luis Klitin - Miami Dade Comm. Coll | 305-347-3301 |

| | | |
|----------|------------------------------|--------------|
| Centrex: | Jim Shea - Boston University | 617-353-9428 |
|----------|------------------------------|--------------|

User Group

| | |
|--|--------------|
| Coordinator: Pat Paul - Cornell University | 607-255-5525 |
|--|--------------|

First-Timers Contest

Last year we began what has now officially become an annual tradition. In order to help "First-Timers" to our Annual Summer Conference mix and mingle, they are given an "ACUTA trivia" form to fill out. Each question has a point value and the First-Timer to earn the most points wins a prize. The forms are passed out Sunday at registration and turned in Tuesday afternoon.

The contest was well received last year in Minneapolis and we hope to continue using it at future conferences. Last year we had a virtual tie between Sue Bodman (Bloomsburg University) and E. Pauline Manuel (University of Texas Health Science Center/San Antonio). They each won a personal radio/cassette player.

This year we had first, second and third place prizes. Bonnie Johnson (University of Kentucky) earned 630 out of 640 possible points and won an emergency signal light/radio for first place. Kay Frentzel (University of Missouri/Columbia) won a desk organizer for her second-place score of 585. John Buswell (Indiana University) came in third with 580 points and won a travel alarm.

Congratulations to the winners and hope to see all the First-Timers back as Old-Timers at future events. ☺

PRESIDENT'S MESSAGE, Continued:

I hope that you will support these meetings. As more events are scheduled they will be listed in the newsletter.

Special Committee Appointment

A committee, composed of Kia Malott, Chair, Michael Grunder, Bill Orrick and Paula Loendorf, has been appointed to review, and if necessary recommend revisions to the constitution and by-laws. If you have any recommendations, please route them to Kia through your Regional Director. Any proposed amendments to the constitution will be published in the June Newsletter and will be agenda items for the annual business meeting in Philadelphia. ☺



Patricia M. Cuocco, Manager
Telecommunications Analysis

The California State University System

Whenever I attend an ACUTA function, someone invariably asks me what kind of system I have. My usual response is "One of everything". That's because the CSU is comprised of 19 separate universities which together form the largest system of higher education in the world. Our enrollment in Fiscal Year 1988/89 will be approximately 345,000 individual students (about 258,000 Full time Equivalents) and we employ over 31,000 full time equivalent faculty and staff. That's a lot of phones, data terminals, LANS, WANS and just about everything else.

In the early 1980's, with Divestiture looming in the future, the CSU took a look at the existing systems which were all CO or CU Centrex Systems with 1A2 Key equipment, separate Data Switches (MICOMs or GANDALFs), and almost universally inadequate cable and wire plants to meet present needs, let alone deal with the future bandwidth requirements. Faced with out of control costs and outdated technology, the CSU embarked on the Telecommunications Utility Upgrade/Replacement project. The Feasibility Study Report, published in August, 1984 by the CSU Chancellor's Office states that the goal of this project is "to provide campus users with a well defined set of reliable communications services in a cost effective manner". Within this context, it is essential to have on each campus

- effective, reliable communications between people, between people and computers, and between computers;

- access to facilities which support the creation, duplication, storage, retrieval, transmission, reception, and processing of voice, data, and video information;

- standards which allows academic and administrative departments to obtain equipment that is compatible with the network; and

- a resource of expertise on telecommunications that can be supplied to planning, users services, problems, documentation, and training."

With these objectives in mind, each campus formed a Telecommunications Steering Committee. This first task was to produce a campus Needs Assessment Report (NAR) which, to the extent possible, detailed the individual campus needs for voice, data and video capability for the next ten years. A few campuses produce this document on their own; most availed themselves of consultant services. The NAR contained a preliminary Cost/Benefit Analysis which showed whether or not the project would result in significant cost avoidance over the ten year period. With the acceptance of this document by the Chancellor's Office, the campus proceeded with the customization of a boiler-plate Request For Proposal.

The RFP is lengthy and extremely detailed from a technological standpoint. The acceptable technical parameters of every required features are specified, and the vendor must prove that the proposed systems meet the criteria. We normally state that the purpose of the RFP is to procure an integrated system for voice and data, with a cable plant to support the campus' needs, however, our definition of integration may differ from the "industry standard". While we require that the Voice Switch be capable of switching data, we do not require that the vendor design the system that way, since switching data through a PBX is often not cost-effective. Vendors are free to propose any number of creative solutions to meet our needs, provided that the system as a whole appears integrated to the end-user, and all of the technical specifications are adhered to. The result has been the "One of everything" approach of which I spoke earlier. Since all of the systems must be compatible with the CSU's wide area network (CSUNET - an X.25 network), this does not present any problem whatsoever.

I am frequently asked by vendors and by peers at other colleges and universities if it would not have been easier to bid all 19 campuses at once and get the same equipment at every campus. For the CSU, the answer is "no". First of all, the project has been spread over several years, and has several more to go. This is primarily a function of the availability of funding from the State. Even though the projects are cost effective over a ten year period, the first few years require funds above the existing budget level. The State could not afford to make that commitment for 19 campuses at one time. More important, however, is the individuality of the 19 campuses. San Francisco does not look like Chico, does not have the same mission, nor the same approach towards achieving that mission. The infrastructure is different; the local area networks are different and the management philosophy is different. The one RFP for 19 campuses approach would be like dictating that all women must fit wear size 10 dresses. That might be the average, but there are going to be a lot of very unhappy (and poorly dressed) women out there.

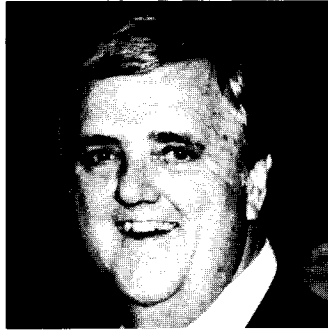
So far, our endeavors have netted the following systems:

| | |
|----------------|---|
| Long Beach | Ericsson MD110 |
| Sacramento | AT&T System 85 w/ISNs |
| Pomona | Intecom IBX (vendor USWest) |
| Sonoma | Ericsson MD110 w/Bridge Systems |
| San Francisco | Neax 2400 with Bridge Systems (vendor Tel-Plus) |
| San Diego | Ericsson MD110 |
| Los Angeles | SL-1, Proteon, Infotron Data Switch (Vendor Centel) |
| Humboldt | Ericsson MD110 |
| San Bernardino | Neax 2400 |
| Bakersfield | Ericsson MD110 |

Continued: Page 8

ACUTA Officers 1988 - 1989

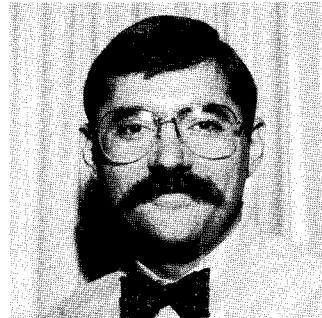
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Kia Malott
Past President
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Michael Grunder
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Finance
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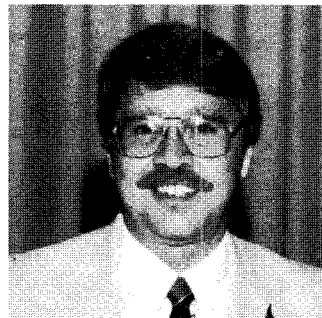
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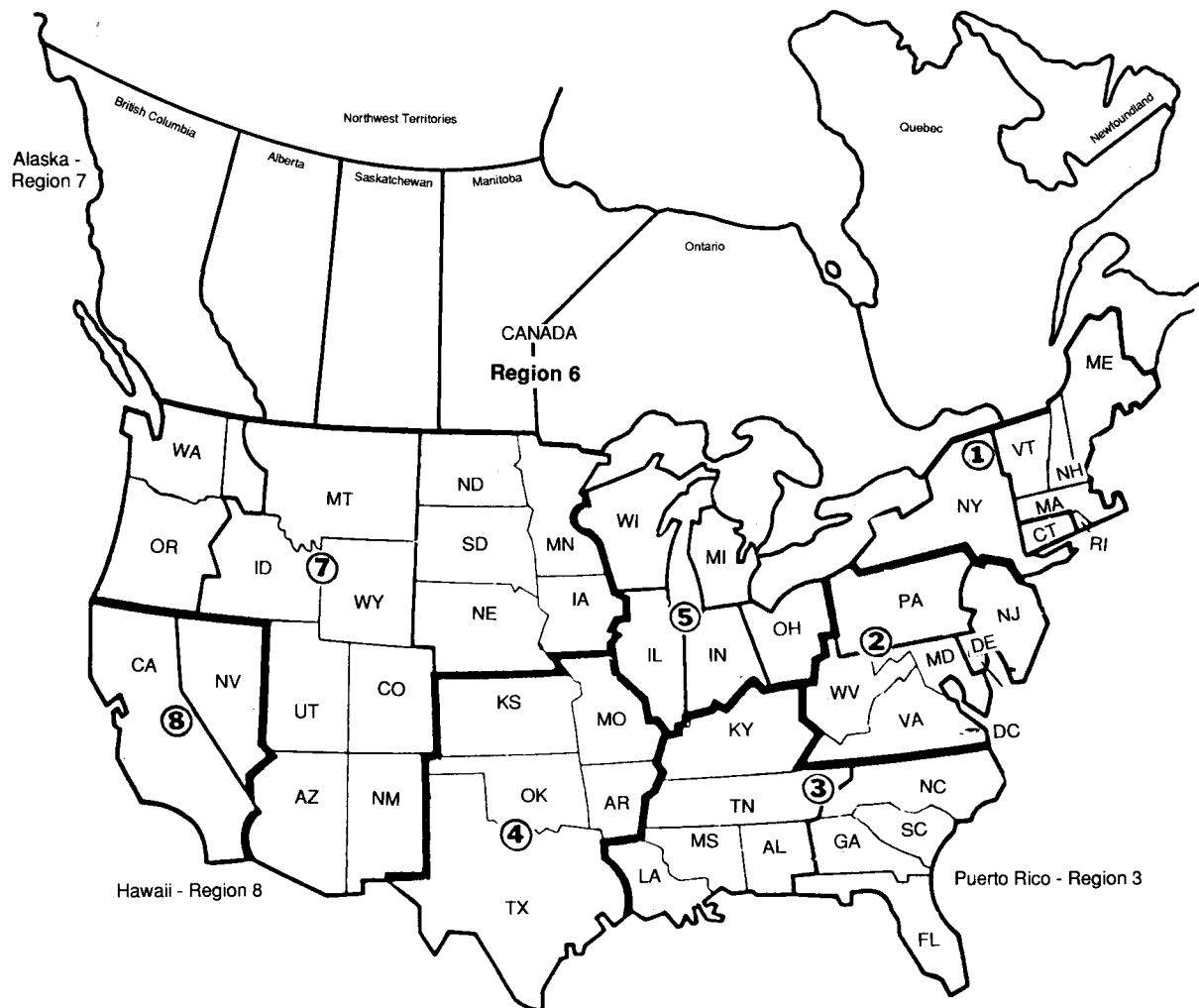
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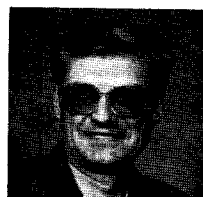
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University
916-278-6923

Region 4
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University of Arkansas
501-575-5505



ANATOMY OF A TELECOMMUNICATIONS INSTALLATION

PART 2

Neil S. Sachnoff
Columbia University



INTRODUCTION

This is the second in a series of articles describing the experiences and lessons learned by the Columbia University Telecommunications Project Team and that of our vendor, IBM/Rolm, while installing a totally new IBM/Rolm telecommunications system, its associated cable plant and a new telecommunications management system.

The first article provided a short history of the events that lead to the actual selection of IBM/Rolm and the 20 month long telecommunications system installation. That brought us to day one (1) of the 618 scheduled days till cut over. In Part 2 of "An Anatomy of a Telecommunications Installation" I describe the scope of the Telecommunications project, detail some of what I call "the simple things", a number of items you can do to help you and the vendor get as many of the necessary things done right, and first time and, discuss how I used a project management tool for myself to manage and keep track of the entire project.

On Dec. 23, 1986 Columbia University signed a \$13.5 million dollar contract with IBM/Rolm for the installation of a new, modern voice/data CBX 9751 telecommunications system. The scheduled cut over date was Sept. 1, 1988, over 20 months after the date the contract was signed. The scope of the Telecommunications Project was actually a moving target as the day to day events changed what had to be done, however, the general overall scope of the project is outlined below:

SCOPE OF COLUMBIA UNIVERSITY TELECOMMUNICATIONS PROJECT

- \$15.6 million for total project;
 - \$13.5 million for IBM/Rolm equipment
 - 10 node 9751 IBM Business Communications System
 - 10 node PhoneMail System, one of the largest co-located PhoneMail Systems in the country
 - \$2.1 million for renovation and other construction
 - Renovation of over 10,000 square feet of space
 - main switch and battery room
 - remote switch room
 - Telecommunications Offices
 - Vendor space for staff and storage
 - Terminal room
 - Asbestos removal

- 10,000 all new digital stations
- 1,000 digital computer host ports
- 200 port in-bound/out-bound modem pool
- Completely re-wire 75 buildings
- All new Feeder plant and cable tray system
- All station and riser wire concealed, most station wire installed in wire mold
- 13,000 A/B Jacks (voice/data), dual outlet
 - 8 pair (4 to a sheath) to each jack
- 12 Manhattan street street crossings, including Broadway and Amsterdam Ave.
- 2 on campus trenches with a total of 28 conduits
- Installation work done in and around several Landmark buildings
- Over 6,000 miles of new cable installed
- Over 50,000 pairs to MDF
- Over 100,000 pairs of riser cable
- Over 100,000 pairs of station cable
- Coordinate project with over 300 Telecommunications Coordinators
- 10,000 individual stations selected and designed
- 27 co-located digital T1 trunks:
 - 192 Direct Outward Dial (DOD) channels
 - 328 Direct Inward Dial (DID) channels
 - 24 long distance service channels (Megacom)
 - 104 two-way lines, this was a first for IBM and New York Telephone
- 12 Foreign Exchange (FX) lines
- 1 microwave system to 110th street and Broadway servicing 1 dorm and 1 administrative building
- 1 broadband system to 36 on campus buildings
- 3 new buildings coming on line at the same time installation is going on
- 100's of individual renovations going on concurrently

THE SIMPLE THINGS

One of the most time saving items we purchased was a Polaroid camera and plenty of film. The instant picture capability save both the University and IBM project teams hours of running around inspecting various areas of the installation. By bringing pictures to meetings and using them as documentation of problems and difficult installation areas we were better able to communicate and be effective as to what had to be done to correct or fix a situation. The pictures were also an effect way of documenting problems for future reference. The phrase "a picture is worth a 1,000 words" was never as true as it was for our installation. The instant camera became a vital piece of the installation equipment.

When printing out lengthy computer reports, do it on carbonless NCR type computer paper so

TELECOMMUNICATIONS INSTALLATION--Continued:

that you have built in copies. This type of paper may be a bit more expensive, but you will save yourself many hours of printing reports over and over when someone else needs a copy. **RULE: Someone else always needs a copy when you have not made one.** Make sure your vendor uses the same approach, they will never make enough copies either.

There is nothing worse or more frustrating than trying to read a dot matrix printout that was produced with a poor ribbon. Make sure you have a generous supply of printer ribbons along with your vendor, and change them as often as necessary.

You will very likely want to receive copies of all documents generated by your vendor that go to anyone else in your organization. To facilitate this, you will have to constantly remind your vendor to copy you on all communications to your organization, regardless of who they are sending it to. They will not remember, they will forget, you will have to constantly remind them. One thing we did to help facilitate the distribution of project related mail was to set up two central mail boxes. One each for University and vendor mail and correspondence. It was a little easier to keep track of incoming and outgoing mail this way.

Your telecommunications project will more than likely last 12 months or more. During this time staff will come and go, be added and changed. You'll save yourself and your vendor a lot of time if you establish a "Master Contact Telephone List". You place on this list all active members of both project teams, home telephone numbers when necessary. I would also include any FAX, Telex, voice mailbox and electronic mailbox numbers. Maintaining this list makes it easy to update and helps keep both sides in touch.

Because the project is likely to last 12 or more months, you will need to consider how you will handle vacation time for your staff and that of your vendor. I have learned one simple rule, there is never a good time to take a vacation or be away from the project. However, it is of critical necessity for you, your staff and that of the vendor to do just that. If your project is anything like that at Columbia, you will constantly be in high gear and confronting major issues and problems daily. The pace will be very demanding and impossible to keep up for an indefinite period of time. As difficult as it is on the staff remaining, time must be scheduled for vacations.

While your system is being installed, if you can, get your vendor to install a small version of your system for your own departments use. This will allow your staff to get some advance knowledge and use of the new system while gaining some experience with the features and the new stations. This is especially true if you are contracting for some type of voice mail system or data capability. Your best bet would be to then place your entire staff on the system along with that of your vendor. This will also help facilitate communications.

If your institution has an operable electronic mail system, insist that your vendor get connected into it and becomes an active user of the system for communications to you and your

staff. Electronic mail will also help facilitate documenting the project.

If your vendor can not provide a simple thing like a good clean copy of documents that you ask for, always insist on originals. If they are smart, they will get the idea. You should also be sure to let your vendor know exactly how many copies of documents you require for distribution. This will facilitate your getting them out to the proper parties with little or no lost time.

Future articles will provide many more suggestions and advise on how to get things done, areas to be avoided and frustrations which can not be avoided.

MY PERSONAL PROJECT MANAGEMENT SYSTEM

Your telecommunications project will literally have hundreds, and by the time you are finished, thousand, of details for you to follow up on and keep track of. Many of you are computer users and will assume that you will use any one of many very good software packages for keeping track of these details. For some of you this may even work out very well. However, I am the type of individual that needs to have as much information with me at all times and at all meetings I attend. This would be somewhat difficult to do with a computer project management system, even if it was running on a lap top computer.

I discovered a wonderfully simple project management tool on one of my business trips. I was scanning through an airline magazine when an ad from the Executive Gallery, Inc. caught my eye. They sell a variety of project management systems. They call them "ScanCard" organizing systems. The one I use is basically a three ring binder with several pages that are cut in such a way that allows you to place about 20 project cards on a page. The top of each project card is visible on the page which can then be scanned for special project notes. The system I used had four double sided pages plus, each cover of the binder was specially cut such that you could place 24 cards on each side in addition to an 8 1/2 x 11 pad. In this manner I had a total of almost 200 cards in a simple, slim three ring binder which I carried to all meetings and made all my meeting notes in. I would use a page for each one of my project managers and vendor and used it to follow up on the assignments they had. This system drove my telecommunications vendor crazy. I never took a card out until the item was either completed or responded to by the vendor.

A computer system for tracking projects is great, but this simple system was more portable, I could take it home at night and weekends and update entries and make changes as needed. This system is not for everyone, but it allowed me to keep track of hundreds of details without them getting lost or misplaced until they were completed.

For more information you can write: The Executive Gallery, 2224 Speedball Road, Statesville, N.C. 28677-2000 or call 1-800-848-2618.

Neil S. Sachnoff, Director Information Services Support Operations, Columbia University, in the City of New York.

UNC-CHAPEL HILL

the right place for RightTouch

— Brent Sutton
Southern Bell

UNC-Chapel Hill has been selected as a site to pilot a permanently installed RightTouch Kiosk in Southern Bell.

Last fall students at UNC were able to place orders for new service by using a terminal that was part of a temporary system installed to facilitate the large quantity of new service requests at the beginning of the school year. This arrangement was so successful that UNC was selected as the ideal location to pilot the RightTouch system.

The RightTouch system will give students and faculty the ability to place telephone service requests, for most on and off campus residence service, at their convenience through the customer-friendly personal computer.

The Kiosks will be placed at convenient locations on the campus and will provide one-stop shopping for telephone service. It will allow the user to connect, disconnect or change service, select service options, and will provide a change carrier and the telephone number to call to establish the billing account.

The RightTouch system will help students ease into their new environment by providing an easy, innovative method of securing telephone service.

This article was furnished to ACUTA News by Steve Harward, University of North Carolina.



"Introduction to Telecommunications"
Boston Workshop, June 8-10, 1988

TOUCH TONE REGISTRATION

—Bill Morris, University of Central Florida

Some possible problems with telephone registration if proper planning is not done. If all students are allowed to register at the same time --- there is no assignment or lottery --- all of the campus phones and community phones go off hook at the same time, because all want to register "first". When all go off hook, the central offices, switches, CBX's get overloaded and the telecommunication in the area comes to a screaming halt. At UCF we assign appointment times, starting at 1 pm until 10 pm daily, we assign 5 students per minute. Anyone can call after their appointment time and the system is operational all night and on weekends. The registration system is operational 10 workdays and one weekend. We have assigned 2,700 appointment times a day which gives our returning students appointment times in first 5 days --- then they have the weekend and 5 more days to get registered.

At UCF we are planning to expand the use of the system for short course registrations and we are working on a system where a student can access their information like:

1. Status of admissions
with message on missing documents
2. Status of financial aid
with message on missing information
3. Status of housing reservation
4. Grades
5. General campus announcements

Our plans are to link our voice mail system of boxes of information on admissions, registration and the various financial aid offerings to our main computer. Where specific, personal information can be obtained.

This is probably a 1989 project.

TELECOMMUNICATIONS SYSTEMS, Continued:

Fresno is evaluating final bids; Chico, Dominguez Hills, Fullerton, Hayward, Northridge, San Luis Obispo and Stanislaus have not yet issued RFPs.

Because CSU is a State agency, subject to the Rules of Competition for the State of California, the process usually requires 9 months from issuance of a bid to the award of a contract. We usually allow an average of another 9 months for implementation. This equates to conceiving and delivering two babies - a lot of work, no small amount of pain, but definitely worth it.

The individual tales, both horrific and funny, abound, but time and space do not permit their telling. If anyone has an interest in further discussing our process or in contacting one of the campuses, call me on 213-985-9429.

~~~~~



**THE COLLEGE OF WILLIAM AND MARY**  
**Office of Personnel Services**  
Thiemes House  
Williamsburg, Virginia 23185

**TELECOMMUNICATIONS DIRECTOR**  
**(Computer Systems Senior Engineer)**

Entry salary \$33,833. Starting salary may be higher depending upon experience or exceptional qualifications and previous salary level of appointee. Position number 229.

The successful applicant will direct the installation and operation of a campus-wide voice and data telecommunications system.

Demonstrated familiarity with the equipment and services in the telecommunications industry required. Strong managerial, analytical, communications and interpersonal skills required. Demonstrated ability in fiscal management required. Degree in business or engineering or an equivalent combination of experience and training required.

Commonwealth of Virginia application form or resume must be received not later than October 21, 1988 in the Office of Personnel Services, College of William and Mary, Thiemes House, Williamsburg, VA 23185.

**An Equal Opportunity, Affirmative Action Employer**



INDIANA UNIVERSITY

OFFICE OF INFORMATION TECHNOLOGY  
Bryan Hall 112  
Bloomington, Indiana 47405  
(812) 335-1053

POSITION ANNOUNCEMENT

**Director of University Telecommunications**

**Indiana University**

Under the general direction of the Assistant Vice-President for Information Technology, the Director of University Telecommunications provides leadership in developing policies for voice and data communications services relative to campus requirements and university standards. In this role, the Director assists campuses in developing communications plans and evaluating alternatives, develops network strategies and policies for voice and data networks connecting all campuses, and serves as liaison to external communications service providers. The position requires a visionary, dynamic individual to develop the overall direction of the University's telecommunications system. The successful candidate will have a minimum of 10 years progressively responsible management experience in voice and/or data communications; demonstrated network planning and management experience; strong interpersonal and supervisory skills; and a Master's degree or equivalent in engineering, telecommunications, business, computer science/systems analysis or a closely related field. Application deadline: October 31, 1988.

Submit applications to:

Daniel W. DeHayes  
Assistant Vice President  
Office of Information Technology  
Bryan Hall 115  
Bloomington, IN 47405

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